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Teaching and Learning Styles in Higher Education Institutions: Do They Match?

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Abstract

This study examines the teaching and learning style of lecturers and students at Universiti Kebangsaan Malaysia. A translated version of Grasha-Riechman (1994) Teaching and Learning Style Inventories were distributed to 120 lecturers and 545 students. Results indicated that expert, facilitator and delegator teaching styles were dominant among lecturers while students are more dominant in collaborative and competitive learning styles. The implications of the findings are discussed in terms of university teaching and learning to enhance delivery systems and the outcomes of learning.

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Keywords: Teaching style; Learning style; Grasha-Riechman Inventory; University teaching; Outcomes of learning

1. Introduction

Higher education institutions are facing new challenges in the new century. The university is no more look upon as the ivory tower as in Wolf (1969) but rather as a center of mass education and economic-driven body (Hairudin Harun, 2002). In this new structure, the students are the clients while lecturers are the service-provider (Tjeldvoll, 1997). Hence, the latter has to meet the ever growing demands of the clientele to a certain extent by adjusting the learning environment. Sternberg (1997) wrote that one of mistake done by lecturers at higher institutions is failing to recognize learning and thinking styles of students. As a result lectures and learning activities were conducted in a manner that does not match or suits the students. This can only be achieved when lecturers are aware of students learning style and its impact on academic performance. Therefore, there is a need to conduct a survey on students learning preferences in order to improve teaching and learning quality.

2. Background of The Study

The role of university changes with time (Mirza 1994). In the advent of borderless world today UKM has to meet the high expectation from the stakeholders especially the government as the financier, future employer, society and students. In the year 2007 the Malaysian Government announced Universiti Kebangsaan Malaysia as one of the

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research university (RU) in the country. The changing role from an institution that educate and prepare students for the job market onto a teaching and research institution require major adjustments on the part of UKM's governance and most of all the academic staff. Although research, publication and dissemination of knowledge have now become her new agenda, teaching however is still the core business to faculty members. The need to improve delivery method and classroom instruction is a never ending endeavor.

In order to foster quality teaching and learning, actions were taken to overcome the occurrence of unproductive delivery methods by faculty and low performance by the undergraduates. Reports of study by the appointed committee spelled out that teaching and learning activities need to be revised (Robiah Sidin, 2000). High percentages of students were found to be over-dependent on lecture notes and lack of self-regulating study skills. In another report lecturers were found to be either teacher-centered or subject-matter-centered. Grasha (1996) contended that if lecturer were to help students learn, they should teach in a way that matches their students' learning style. Hence this study is conducted to explore UKM students' social learning preferences and suggest necessary measures to improve the teaching and learning environment.

3. Research Questions

The study intends to answer the following questions:

1. Is there any significant difference in learning style based on gender, age and courses taken?
2. Which learning style is dominant among UKM students?
3. Is there any relationship between learning style and academic performance?

4. Literature Review

Most educators agreed that quality teaching contributes to quality learning. Effective learning depend on the part of the learner whether one is active, highly motivated and having the right strategy knowledge. In order to help college or higher institution students to learn effectively instructors need to know and adapt to different styles of learning (Grasha, 1996). Review of literature showed that learning style like most psychological terminology have been addressed differently. As a result learning style varies in definition, models and instruments (Reynolds, 1997). This however is not a setback towards understanding different ways on how students acquire, retain and apply knowledge learnt.

Further analysis would show that Pask et al. (1977), Cornett (1983), Entwistle and Ramsden (1983), Grasha (1996) and Sternberg (1997) defined learning style as the different ways or means by which student learn. Keefe (1979) however stressed on the process of learning while Dunn, Dunn and Price (1985) were concentrating on learning procedures and responses.

Many instruments have been developed to determine students' learning style which includes Field dependence/field independence, Jungian Models, Sensory Models, Biggs' Study Process and Grasha-Riechmann Social Interaction Model. For the purpose of this study the latter was selected as it seems ideal for assessing learning preferences at tertiary level.

Grasha and Reichman (1974) postulates that learning takes place in social context and therefore learning style can be observed by the way students behaves and responses to the social-learning environment. The six learning styles are categorized as follows;

Independent:	Students prefer to work alone and need little direction or attention from lecturer
Avoidant:	Students with high rate of absenteeism. Poor work and study organization
Dependent:	Students depend heavily on lecturer and friends in learning task.
Collaborative:	Students who find group work enjoyable.
Participative:	Students who are attentive and responsive to course work requirements.
Competitive:	Students emphasize on high grades and attention from lecturer.

5. Research Methodology

The population for the current study is 15, 298 students. This exploratory study uses the survey method by distributing 600 questionnaires to third year students in UKM Bangi. Instrument used was a translated version Grasha-Reichmann (1974) Student Learning Style Inventory. Data were analyzed using SPSS version 11.0. A total of 545 questionnaires were returned of which 205 were male and 340 female students.

6. Results of the Study

a) *Is there any significant difference in learning style based on gender, age and courses taken?*

Table 1 represent the distribution of learning styles based on gender, ethnic, age and field of study.

Table 1. Distribution of Learning Styles Based on Gender, Ethnic, Age and Field of Study

Learning Style	Gender		Ethnic		Age			Field of Study		
	M	F	B	NB	A1	A2	A3	Sc	SSc	Pro
Independent (5.46)	4.53 .76	4.49 .67	4.51 .70	4.45 .69	4.46 .67	4.51 .79	4.74 .64	4.55 .72	4.59 .72	4.38 .65
Dependent (5.74)	4.91 .75	5.17 .61	5.08 .65	5.02 .80	5.04 .66	5.01 .76	5.40 .52	5.17 .64	5.07 .75	4.98 .63
Collaborative (4.90)	4.86 .84	5.06 .73	5.04 .75	4.72 .85	4.93 .73	4.84 .85	5.53 .71	4.92 .77	5.13 .84	4.92 .71
Competitive (4.06)	4.52 .86	4.60 .73	4.61 .76	4.37 .86	4.60 .74	4.45 .85	4.62 .83	4.55 .84	4.64 .79	4.53 .70
Participative (5.60)	4.90 .87	5.15 .69	5.06 .76	5.01 .83	4.94 .71	5.04 .87	5.70 .59	5.05 .75	5.20 .87	4.93 .68
Avoidant (5.48)	3.57 .84	3.48 .82	3.52 .82	3.47 .87	3.57 .83	3.57 .83	3.12 .69	3.54 .76	3.56 .93	3.45 .79

Legend:

M = male	F = female
B = bumis	NB = nonbumis
U1 < 22 years	U2 = 23 to 26 years
U3 > 27 years	Sc = Science
SS = Social Sciences	PR = Professional

The present study compared social learning styles of students in UKM from three different area of studies. The average or mean scores of GRSLS are shown in Table 1. Table 1 shows that male students got higher mean than female students in Independent (Mean = 4.53, S.D = .76) and Avoidant (Mean = 3.57, S.D = .84) learning style. Female students showed higher mean on Collaborative (Mean = 4.86, S.D = .84), Dependent (Mean = 4.91, S.D = .75), Competitive (Mean = 4.60, S.D = .73) and Participative (Mean = 5.15, S.D = .69). It is also noted that student's from different age level recorded different mean value for various learning style except for the Avoidant type (Mean = 3.57, S.D .83).

It is also noted that student's from different age level recorded different mean value for various learning style except for the Avoidant type (Mean = 3.57, S.D .83). The same table shows that there is only slight different in learning styles between the bumiputera and non bumiputera students in UKM. For example, mean for Independent style of bumiputera were 4.51 while the nonbumiputera were 4.45. This finding reflected that ethnic variable does not contribute much to learning style of students in UKM. Table 1 also shows that pure science students are more dependent (Mean = 5.17, S.D = .64) as compared to social science (Mean = 5.07, S.D = .75) and professional course students' (Mean = 4.98, S.D = .63).

Further analysis using the one way MANOVA shows that there was a significant difference $F\{ (2, 513) = 5.46, p = 0.05\}$; Wilk's Lambda = .979 ; partial eta = .021 in overall learning style between the male and the female students only.

b) Which learning style is dominant among UKM students?

Table 2. Comparison of Mean Learning Style and the Standardized Mean as Proposed by Grasha (1996)

Learning style	Sample mean	Standardized mean	Inference
Independent	4.50	5.46	Not dominant
Avoidant	3.52	5.46	Not dominant
Collaborative	4.98	4.90	Dominant
Dependent	5.07	5.74	Not dominant
Competitive	4.57	4.06	Dominant
Participative	5.27	5.60	Not dominant

Table 2 represents the comparison of mean learning style and the standardized mean as proposed by Grasha (1996). Comparison between the sample mean and the standardized mean shows that Collaborative (mean = 4.98 > 4.90) and Competitive learning style (mean = 4.57 > 4.06) is dominant among UKM students. The Independent, Avoidant, Participative and Dependent learning style is not dominant.

c) Relationship between learning style and academic performance

A correlation test was conducted to find out whether there is a relationship between learning style and academic performance. It was found that there was a low relationship between Collaborative and Competitive learning style and CGPA ($r = .103$ dan $r = .123 < p = 0.001$) respectively.

7. Discussion and Conclusion

Findings of the study shows that students' learning style varies based on gender, age and type of courses. Independent and self-regulated students learn best by doing self study with little guidance. In this case the male students and those in social science would prefer lectures to give individual task where they can work on their own. Female and students' taking the pure science courses on the other hand will benefit more from a well structured lecture, guidance and concrete hands-on experiences. Therefore, faculty should first understand that students use a variety of approaches to learning that may not match their own. This is to cater the diverse learners in lecture halls.

Since Competitive learning style is dominant, the university could encourage students to excel by providing more grants, scholarship or achievement rewards. Lecturers and instructors should use also high-technology academic material and assessment methods to ensure meaningful learning takes place. This study also shows that Participative learning style is also dominant among UKM undergraduates. In order to benefit from Participative learning style

faculty should provide more group activities or project in their course evaluation. Working in groups such as cooperative learning have proven to increase individual and team-work performance.

Results of this study showed that Independent and Participative learning style was not dominant among UKM. This imply that students were not practicing learning style that would make them independent learner and active in class discussion. Playing the role of an observer and passive learning in lecture theatre is not an effective learning strategy. Therefore, assessment method should include individual and group assignments as well. In conclusion, it is imperative that lecturer realized the diverse learning style among students and conduct instruction and evaluation technique that matches the different learner in their class.

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